

EV Charging What Do Consumers Want (and Need)?

**Jay Friedland
Plug In America**

Who is Plug In America?

- **35,000 Supporters—Current and Future EV Consumers**
- **Helped drive more than US\$14 billion EV funding in the American Recovery and Reinvestment Act (2009)**
- **Plug In America Educates and Influences Policymakers as an Independent Voice for Consumers**
- **Active Supporters Drive Advocacy Campaigns Using Internet Tools**
- **We've been there, we've seen that!**



What Do Consumers Really Want?



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What Do Consumers Really Want?

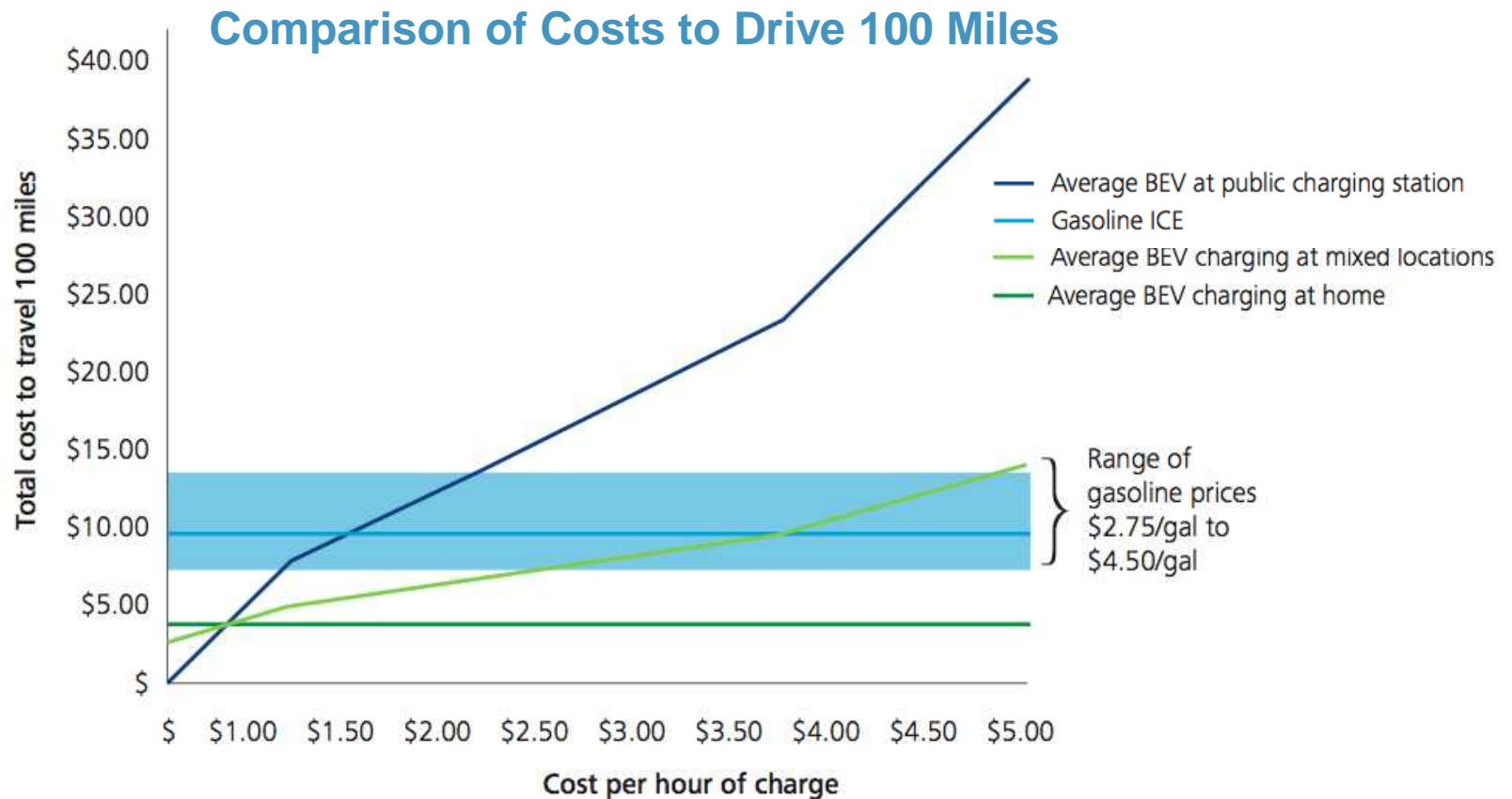
- Get Off Gasoline – Once electric they never go back!
- \$\$\$\$ Save Money \$\$\$\$
- Engage Oil Politics
 - National Security, Global Environment, or both!
- Charge Whenever and Where Ever They Can
 - Ubiquitous & Open Access
 - Willing to Pay!
 - But Where are the Stations? **Signage!!!!**
- Go Farther and Farther - Use EV for the Maximum VMT
- Incentives – Cost Parity (Rebates/Tax Credits), HOV, etc...



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What Do Consumers Really Want?



Source: Plugged In: The Last Mile
(Deloitte 2013)

Assumptions:

- Average ICE mileage of 35.2 mpg²⁷
- Average cost of electricity at home \$0.12 kWh²⁸
- Average cost for gallon of gasoline \$3.23²⁹
- Range and battery information from the vehicle automotive websites

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Goals of SB454 – EV Open Access Act

Straightforward and sound set of basic regulations strengthens and increases market size, especially as the number of vehicles continues to grow at an accelerating pace – gives consumers confidence.

- Public charging stations which require payment able to accept a credit card transaction or allow mobile technology.
 - Solves key issue of never leaving a driver stranded at a public charger where the electricity is flowing but not actually available
 - No membership required to charge – Open Access
- Pricing Transparency
 - When a driver accesses a station, they need to know the cost
 - Most of the stations provided by EV charging industry already have the capability of point of purchase notification to consumers.
- Law sets a baseline for consumer acceptance
 - Allows for more consumer confidence in knowing that public charging is not only available to them, but also that the drivers will know how much it will cost them
 - Reporting locations to NREL for uniform location data
 - Support interoperability standards on billing for charging



Goals of SB454 – Obstacles and Resolution

- Consumers drive vehicle sales and boost charging usage
 - Whole ecosystem grows
- No intention to be in conflict with industry
- Number of issues which turned out to be resolvable
 - Property Rights, Signage Requirements, Retrofit Costs, Mapping, Consumer Complaints
- Unnecessary bureaucracy vs inspiring consumer confidence
- Senator Ellen Corbett Meets with All Stateholders
 - Brings together groups for resolution
 - Not very far apart, gains quick consensus
- SB 454 is inspiring EV consumer confidence around public charging availability and is helping create a larger market





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**WE DRIVE
ELECTRIC.
YOU CAN TOO.**